Prevalence of Intestinal Parasites among Rural Inhabitants of Fouman, Guilan Province, Northern Iran with Emphasis on Strongyloides stercoralis

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Abstract

Background: Intestinal parasitic infections (IPIs) are among the most important etiologies of gastrointestinal disorders in developing countries. The present study was performed to determine the prevalence of IPIs in rural inhabitants of Fouman, northern Iran.

Methods: Overall, 31 villages were randomly selected during 2015-2016. Stool samples were collected from 1500 inhabitants aged 2-87. The samples were examined by direct wet smear, formalin ethyl-acetate concentration and agar plate culture. Trichrome staining and modified acid-fast staining were used as confirmatory tests for intestinal amoeba and flagellates and *cryptosporidium* spp., respectively. Data were analyzed with Chi-Square and Fisher exact tests using SPSS.

Results: 8.06% of participants were positive for at least one intestinal parasite. The prevalence of mixed parasitic infections was 0.87%. The most prevalent IPIs were caused by Trichostrongylus spp. (3.13%), followed by Strongyloides stercoralis (1.5%), Giardia lamblia (1.3%), and Entamoeba coli (1.0%), Blastocystis hominis (0.86%), E. histolytica/dispar (0.53%), Endolimax nana (0.26%), Iodamoeba butschlii (0.13%), Trichuris trichiura (0.07%), Enterobius vermicularis (0.07%), Hook worm (0.07%) and E. hartmani (0.07%). Statistically, the prevalence of IPIs showed significant differences regarding the age groups, education status, occupation ($P<0.001$), and the habit of eating raw vegetables ($P<0.007$), whereas, the differences were insignificant with regard to sex ($P=0.924$) and water supply ($P=0.088$).

Conclusion: The prevalence of IPIs, especially soil-transmitted helminthes (STHs) has sharply decreased in northern Iran. Excluding *Trichostrongylus* spp. and *S. stercoralis*, other intestinal parasites only produce a marginal and unnoticeable health problem in this area, today.